IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Atty. Docket

LUCIEN J. BREEMS ET AL NL000116

Filed: CONCURRENTLY

Title: METHOD AND QUADRATURE DEVICE FOR COMPENSATING MISMATCH IN PARALLEL PATHS BY SWITCHING SIGNALS THEREIN

Commissioner for Patents, Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee and examination, please amend the above-identified application as follows:

IN THE CLAIMS

Please amend the claims as follows:

3. (Amended) The quadrature device (1) according to claim 1, characterized in that the quadrature device (1) is a sigma-delta A/D converter having I and Q feedback paths and D/A converters (9I, 9Q) in the feedback paths for exchanging I and Q feedback signals.

4. (Amended) The quadrature device (1) according to claim 1, characterized in that the switching means (3, 3', 6, 3'') are equipped for performing an I and Q data dependent exchange of the I and Q signals.

5. (Amended) The quadrature device (1) according to claim 4, characterized in that the data dependent exchange takes place on an exclusive OR basis.

6. (Amended) A communication device, receiver, transmitter, transceiver, telephone, mixer, modulator or demodulator, comprising a quandrature device (1) according to claim 1.

9. (Amended) The method according to claim 8, characterized in that the quandrature device (1) is a sigma delta modulator producing I and Q bitstreams, and that I and Q feedback signals from said output bitstreams are exchanged.

10. (Amended) The method according to claim 9, characterized in that the exchanging has a rate which is a multiple of the sampling frequency of said bitstreams.

11. (Amended) The method according to claim 10, characterized in that the exchanging of the I and Q signals takes place in dependence on their I and Q data content.

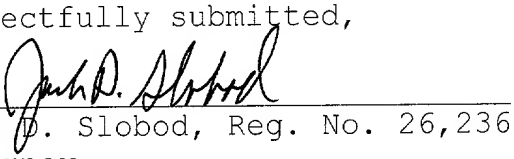
12. (Amended) The method according to claim 11, characterized in that the exchanging of the I and Q paths takes place on an exclusive OR basis, whereby alternately the I and Q signals are fed back as they are or are fed back interchanged in exclusive OR dependence on the I and Q data content.

REMARKS

The claims have been amended to delete multiple dependencies.

The above amendments are submitted to place this application in proper U.S. format. Entry of the amendment and an early action on the merits are solicited.

Respectfully submitted,

By 
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Appendix A

3. (Amended) The quadrature device (1) according to claim 1 [or 2], characterized in that the quadrature device (1) is a sigma-delta A/D converter having I and Q feedback paths and D/A converters (9I, 9Q) in the feedback paths for exchanging I and Q feedback signals.

4. (Amended) The quadrature device (1) according to ]one of the claims 1-3] claim 1, characterized in that the switching means (3, 3', 6, 3'') are equipped for performing an I and Q data dependent exchange of the I and Q signals.

5. (Amended) The quadrature device (1) according to claim 4 [referring to claim 3], characterized in that the data dependent exchange takes place on an exclusive OR basis.

6. (Amended) A communication device, receiver, transmitter, transceiver, telephone, mixer, modulator or demodulator, comprising a quandrature device (1) according to [one of the claims 1-5] claim 1.

9. (Amended) The method according to [one of the claims 7-8] claim 8, characterized in that the quandrature device (1) is a sigma delta modulator producing I and Q bitstreams, and that I and Q feedback signals from said output bitstreams are exchanged.

10. (Amended) The method according to [one of the claims 7-9] claim 9, characterized in that the exchanging has a rate which is a multiple of the sampling frequency of said bitstreams.

11. (Amended) The method according to [one of the claims 7-10] claim 10, characterized in that the exchanging of the I and Q signals takes place in dependence on their I and Q data content.

12. (Amended) The method according to [one of the claims 7-11] claim 11, characterized in that the exchanging of the I and Q paths takes place on an exclusive OR basis, whereby alternately the I and Q signals are fed back as they are or are fed back interchanged in exclusive OR dependence on the I and Q data content.